AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1.   (Currently Amended) A network electric device for communicating with another network electric device on a network, the network electric device ~~by including~~ comprising a processor configured for executing at least an application layer, a network layer, a data link layer, [[and]] a physical layer, an application software, a network management sub-layer, and a parameter management layer,

wherein the application layer handles a message for controlling or monitoring the network electric device or the other network electric device, and the application layer communicating with the application software and communicating with the network layer,

wherein the network layer performs at least an address management function and a routing control function ~~connects the network electric device to the other network electric device,~~ and the network layer communicating with the data link layer,

wherein the data link layer accesses a shared transmission medium, [and] the data link layer communicating with the physical layer,

wherein the physical layer provides a physical interface between the network electric device and the other network electric device, [[and]]

~~wherein the network electric device includes:~~

wherein the [[an]] application software ~~for performing~~ performs an intrinsic function of the network electric device, ~~and providing an interface with the application layer;~~

~~a network management layer for managing a parameter or the network electric device accessing the network; and~~

the parameter management layer communicates with each of the application layer, the network layer, the data link layer, the physical layer, and the network management sub-layer, the parameter management layer reading and setting ~~for setting, getting or transmitting~~ a parameter used in each of the application layer, the network layer, the data link layer and the physical layer, and wherein the network management sub-layer sets and manages, through the parameter management layer, the parameter used in the physical layer without communicating with the application layer, the network layer, and the data link layer. ~~upon the request of the network management sub-layer.~~

2.   (Previously Presented) The network electric device of claim 1, wherein the physical layer further comprises a special protocol for providing an interface with a dependent transmission medium, and the network electric device includes a home code control sub-layer for managing a home code for network security when accessing the dependent transmission medium.

3-6. (Canceled)

7.   (Previously Presented) The network electric device of either claim 1 or 2, wherein the interface between the physical layer and the data link layer comprises a frame sending primitive, a frame receiving primitive and a line status transmitting primitive.

8-9. (Canceled)

10.   (Previously Presented) The network electric device of either claim 1 or 2, wherein the interface between the data link layer and the network layer comprises a packet sending primitive, a packet receiving primitive and a data link layer completing primitive.

11-14. (Canceled)

15.   (Previously Presented) The network electric device of either claim 1 or 2, wherein the interface between the network layer and the application layer comprises a request message sending primitive, a message receiving primitive and a network layer completing primitive.

16-20. (Canceled)

21.   (Previously Presented) The network electric device of either claim 15, wherein the network electric device performs a master function.

22.   (Previously Presented) The network electric device of either claim 1 or 2, wherein the interface between the network layer and the application layer comprises a request message receiving primitive, a response message sending primitive, an event message sending primitive and a network layer completing primitive.

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23-28.   (Canceled)

29.   (Previously Presented) The network electric device of claim 22, wherein the network electric device performs a slave function.

30.   (Previously Presented) The network electric device of either claim 1 or 2, wherein the interface between the application layer and the application software comprises a user request primitive, a user download request primitive, a user upload request primitive, a user response primitive, a user event receiving primitive and an application layer completing primitive.

31-37.   (Canceled)

38.   (Previously Presented) The network electric device of claim 30, wherein the network electric device performs a master function.

39.   (Previously Presented) The network electric device of either claim 1 or 2, wherein the interface between the application layer and the application software comprises a user request receiving primitive, a user response sending primitive and a user event sending primitive.

40- 42.   (Canceled)

43.   (Previously Presented) The network electric device of claim 39, wherein the network electric device performs a slave function.

44.   (Previously Presented) The network electric device of claim 1, wherein the parameter of the physical layer comprises a communication speed.

45.   (Previously Presented) The network electric device of claim 1, wherein the parameter of the data link layer comprises at least one of frame timeout, a maximum frame allowable interval time, a minimum packet allowable interval time, a backoff retry number, a maximum transmission allowable time, a busy check time and a transmission delay time.

46.   (Previously Presented) The network electric device of claim 1, wherein the parameter of the network layer comprises at least one of a product code, a node address, a cluster code, a home code, a maximum retry number, transmission timeout, a response delay time, a transmission delay time and a duplicate packet elapsed time.

47.   (Previously Presented) The network electric device of claim 1, wherein the parameter of the application layer comprises at least one of a transmission interval between address request messages, a transmission interval between active event messages, a buffer size, service timeout and a transmission interval between download messages.

48.   (Previously Presented) The network electric device of any one of claims 1 or 6 or 44 to 47, wherein the network management sub-layer interfaces with the parameter management layer through at least one of a parameter setting primitive and a parameter getting primitive in order to set or get at least one of the parameters of the physical layer, the data link layer, the network layer and the application layer.

49.   (Previously Presented) The network electric device of claim 48, wherein the parameter management layer interfaces with the physical layer, the data link layer, the network layer or the application layer through at least one of a parameter setting primitive, a parameter getting primitive and a parameter transmitting primitive in order to set, get or transmit at least one of the parameters of the physical layer, the data link layer, the network layer and the application layer.